

BASIC MATH SKILLS

50 items | Suggested time: 50 minutes

1. Multiply and simplify: $2\frac{3}{5} \times 1\frac{1}{8} =$
 - A. $2\frac{37}{40}$
 - B. $2\frac{5}{8}$
 - C. $2\frac{3}{40}$
 - D. $3\frac{1}{20}$
2. In Downsville, a bus token cost 25¢ in 1990. This year, a bus token cost 75¢. What is the percent of increase in the cost of the token?
 - A. 50%
 - B. 75%
 - C. 200%
 - D. 300%
3. A cake recipe calls for $2\frac{1}{2}$ cups of flour. How many cups are needed to make 6 cakes?
 - A. 12 cups
 - B. 13 cups
 - C. 14 cups
 - D. 15 cups
4. Takuo bought snacks from the vending machine. He paid \$1.35 for cookies and got change from his \$5. Then he paid another \$1.75 for a bag of chips. How much money did he have left?
 - A. \$1.50
 - B. \$1.70
 - C. \$1.90
 - D. \$2.10
5. Express $\frac{4}{5}$ as a percent.
 - A. 20%
 - B. 40%
 - C. 50%
 - D. 80%

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6. How many kilometers are there in 12 miles?
- A. 7.5 miles
 - B. 13.2 miles
 - C. 19.2 miles
 - D. 22 miles
7. What date in Arabic numerals is Roman numeral MCLXV?
(Enter numeric value only.)
- _____
8. Multiply: $0.25 \times 0.4 =$
- A. 0.01
 - B. 0.1
 - C. 1
 - D. 10
9. Multiply: $0.22 \times 0.75 =$
- A. 0.00165
 - B. 0.0165
 - C. 0.165
 - D. 1.65
10. At the emergency room Thursday morning, ambulances delivered 5 laceration victims, 8 people with broken bones, 2 heart attack patients, and 5 patients with breathing difficulties. What percentage of the deliveries were people with broken bones?
(Enter numeric value only.)
- _____
11. Which numeric system was a base 20 system?
- A. Mayan
 - B. Babylonian
 - C. Roman
 - D. Arabic

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12. What is the least common denominator for $\frac{3}{8}$ and $\frac{1}{12}$? (Enter numeric value only.)

13. The trumpet blows reveille at 6:30 A.M. What time is that in military time?

- A. 0630
- B. 6030
- C. 1503
- D. 1530

14. At Teeburg Community College, the ratio of teachers to students is 1:12. Which could be the actual student and teacher population at Teeburg?

- A. 24 teachers, 312 students
- B. 85 teachers, 1,020 students
- C. 89 teachers, 979 students
- D. 92 teachers, 1,288 students

15. Divide and simplify: $4\frac{5}{8} \div 1\frac{1}{2} =$

- A. $4\frac{1}{24}$
- B. $3\frac{23}{24}$
- C. $3\frac{1}{12}$
- D. $3\frac{1}{16}$

16. Bai Lin estimates that of her monthly paycheck, she puts 10% in savings and spends 30% on living expenses. If she has \$1,545 left after that, how much is her monthly paycheck?

- A. \$2,175
- B. \$2,250
- C. \$2,575
- D. \$2,650

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17. The purchasing department ordered 500 surgical caps at \$4.99 apiece and 6 cases of nurse caps at \$23.99 per case. How much did they spend on this order? (Enter numeric value only. If rounding is necessary, round to the dollar.)
- _____
18. Grayson left a \$2.43 tip for a lunch that cost \$13.50. What percent tip did he leave?
- A. 16%
 - B. 18%
 - C. 20%
 - D. 22%
19. How many liters are there in 500 milliliters?
- A. 0.5 liters
 - B. 5 liters
 - C. 50 liters
 - D. 500,000 liters
20. A plan for a shed is drawn on a 1:10 scale. If the roof of the real shed measures 4 feet by 5 feet, what were the measurements on the plan?
- A. 80 inches by 100 inches
 - B. 40 inches by 50 inches
 - C. 4.8 inches by 6 inches
 - D. 4 inches by 5 inches
21. Subtract: $43.21 - 1.234 =$
- A. 41.976
 - B. 41.067
 - C. 30.87
 - D. 30.717

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22. The number 8.4 is 15% of what number? (Enter numeric value only.)

23. Add and simplify: $5\frac{2}{3} + \frac{6}{7} =$

- A. $6\frac{1}{21}$
- B. $6\frac{1}{7}$
- C. $6\frac{3}{14}$
- D. $6\frac{11}{21}$

24. At the concession stand, Joanie bought a hot dog for \$1.25, popcorn for \$1.35, and a drink for \$2. She paid with a \$5 bill. What is the least number of coins she could have received as correct change?

- A. One
- B. Two
- C. Three
- D. Four

25. Convert this military time to regular time: 2120 hours.

- A. 9:20 A.M.
- B. 9:20 P.M.
- C. 2:12 A.M.
- D. 2:12 P.M.

26. Olivia's Bakery gives out one extra cupcake for each dozen sold, to make a "baker's dozen" of 13 in all. How many extra cupcakes does the bakery add to a special order of 180 cupcakes?

- A. 12
- B. 13
- C. 14
- D. 15

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27. What is 110% of 40?
- A. 44
 - B. 50
 - C. 55
 - D. 60
28. Divide: $92 \div 11 =$
- A. 8 r3
 - B. 8 r4
 - C. 8 r7
 - D. 9 r1
29. Stanton runs 2 miles twice a week and 3 miles once a week. If he runs every week, how many miles does he run in a year?
- A. 185
 - B. 260
 - C. 330
 - D. 364
30. What is 15% of 95?
- A. 14.25
 - B. 18.5
 - C. 24.25
 - D. 28.5
31. Express $\frac{12}{30}$ as a decimal.
- A. 0.004
 - B. 0.04
 - C. 0.4
 - D. 4
32. How many kilograms are there in 11 pounds?
- A. 5 kilograms
 - B. 5.5 kilograms
 - C. 22.2 kilograms
 - D. 24.2 kilograms

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33. Express the ratio of 6:7 as a percentage.
- A. 67%
 - B. 76%
 - C. 86%
 - D. 93%
34. At Cosmic Comix, Svante can buy three comic books for \$9.99. How many can he buy for \$50?
- A. 12
 - B. 15
 - C. 18
 - D. 21
35. Write the date 1776 in Roman numerals.
- A. MDCCLXXVI
 - B. MDDLXXI
 - C. MCCDLXVI
 - D. MCMLXXVI
36. In his stamp collection, Bruno has 15 more stamps from Europe than from Africa, and 18 more stamps from Asia than from Africa. If he has 27 stamps from Europe, how many Asian stamps does he have?
- A. 12
 - B. 22
 - C. 30
 - D. 40
37. Multiply: $5.2 \times 2.5 =$
- A. 0.013
 - B. 0.13
 - C. 1.3
 - D. 13

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38. Multiply: $0.88 \times 2.1 =$
- A. 0.01848
 - B. 0.1848
 - C. 1.848
 - D. 18.48
39. If the outside temperature is currently 15 degrees on the Celsius scale, what is the approximate temperature on the Fahrenheit scale?
- A. 59°F
 - B. 61°F
 - C. 63.5°F
 - D. 65.2°F
40. A landscaping plan is drawn on a 1:50 scale. If a deck in the plan measures 12 cm by 10 cm, how large is the deck in real life?
- A. 12 m by 10 m
 - B. 6 m by 5 m
 - C. 5 m by 2 m
 - D. 4 m by 3 m
41. Rebecca is able to paint 12 pickets on her picket fence in an hour. Her fence is 72 feet long, with 2 pickets per foot. How long will it take her to paint the fence?
- A. 2.4 hours
 - B. 6 hours
 - C. 12 hours
 - D. 16.4 hours
42. Divide: $14.152 \div 12.2 =$
- A. 0.0116
 - B. 0.116
 - C. 1.16
 - D. 11.6

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43. Subtract and simplify: $\frac{7}{4} - \frac{1}{12} =$

- A. $\frac{1}{2}$
- B. $1\frac{3}{8}$
- C. $1\frac{1}{4}$
- D. $1\frac{2}{3}$

44. At the Farmer's Market, James bought 6 lemons for \$1.44. How many did Casey buy for \$4.80?

- A. 12
- B. 18
- C. 20
- D. 24

45. Subtract and simplify: $2\frac{11}{12} - \frac{3}{16} =$

- A. $1\frac{7}{8}$
- B. $2\frac{1}{8}$
- C. $2\frac{5}{6}$
- D. $2\frac{35}{48}$

46. Express 85% as a fraction in lowest terms.

- A. $\frac{17}{20}$
- B. $\frac{5}{6}$
- C. $\frac{13}{15}$
- D. $\frac{9}{10}$

47. 176 is 88% of what number? (Enter numeric value only.)

48. Carlotta earned 2% on her savings of \$1,050. How much did she have then?

- A. \$1,052
- B. \$1,060
- C. \$1,071
- D. \$1,075

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49. Of the 300 patients receiving a placebo, 60% showed improvement in their symptoms. How many patients showed no improvement? (Enter numeric value only)

50. How many cups are there in 2 gallons? (Enter numeric value only)

**STOP. IF YOU HAVE TIME LEFT OVER,
CHECK YOUR WORK ON THIS SECTION ONLY.**